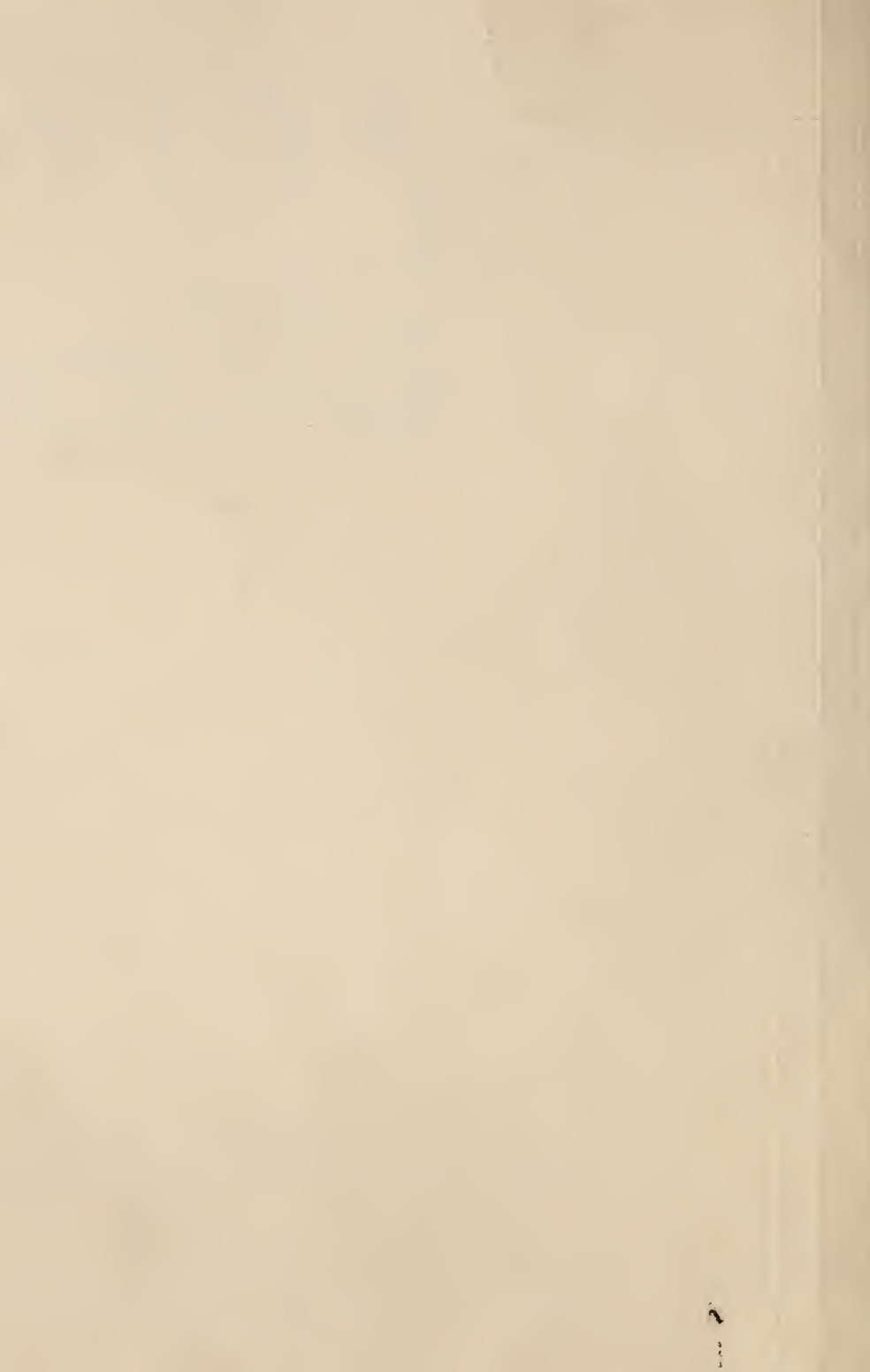


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PULPWOOD PRODUCTION

in the Northeast

1963



by Neal P. Kingsley

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NORTHEASTERN FOREST EXPERIMENT STATION, UPPER DARBY, PA.

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RICHARD D. LANE, DIRECTOR

The Author

NEAL P. KINGSLEY, research forester, received his Bachelor's degree in forestry from the University of New Hampshire in 1961 and his Master's degree in forest economics from the same university in 1963. He joined the Northeastern Forest Experiment Station in August 1962 and has been stationed since that time at Upper Darby, Pennsylvania, where he is associate resource analyst in the Experiment Station's Forest Survey unit.

**PULPWOOD
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Annual Survey Begun

BECAUSE THE woodpulp industry is one of the mainstays of the forest economy of the Northeastern States, the U. S. Forest Service's Northeastern Forest Experiment Station has begun an annual survey of pulpwood production in the region. This is a report on the survey completed in 1963. The main purposes of these surveys are:

- To determine the current magnitude of the pulpwood market. The survey will help pulpwood producers and pulpmill wood-procurement staffs to identify areas that are capable of producing large volumes of pulpwood.
- To provide year-by-year data that can be used in analyzing trends so that the future of the pulpwood industry can be predicted with reasonable accuracy. This information should not only serve the pulpwood industry in making decisions about

investment of capital and mill development; it should also be useful to public agencies concerned with the management of timber resources because it will provide the basis for projections of future demand and the basis for management decisions.

- To provide data that can be used in evaluating the effects of the pulpwood harvest on the forest resource. This should help industry, landowners, and public agencies in carrying out orderly management of the timber resource to provide for timber supplies to fill future demands.

The Woodpulp Industry

Few industries are more vital to the forest economy than the woodpulp industry. Nationwide, the industry uses about one-fourth of all roundwood timber volume produced.

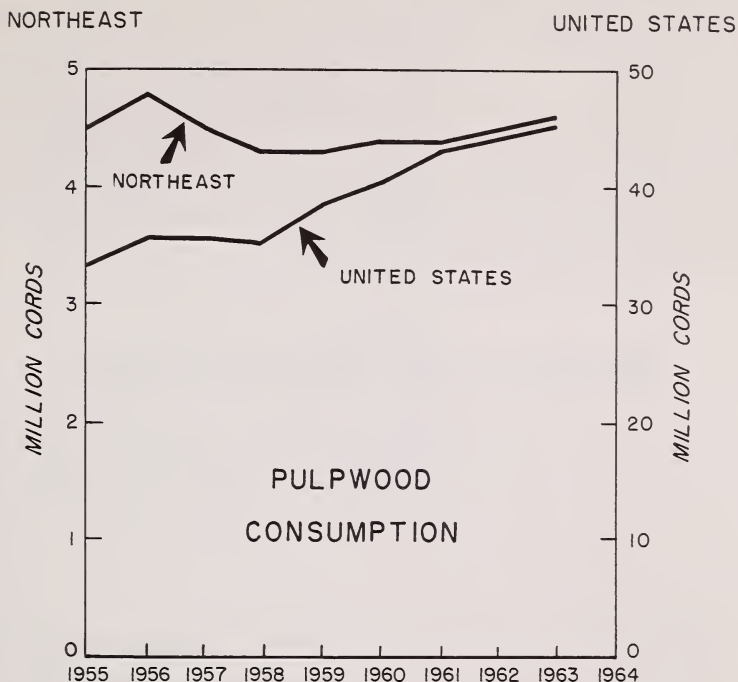
Seventy-four percent of the Nation's paper and paperboard production in 1962 was manufactured from woodpulp, and the trend is definitely upward. In 1962 the United States produced 2.6 billion cubic feet of round pulpwood; and 12 percent of this total, or 314 million cubic feet, was produced in the 12 Northeastern States — Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and West Virginia.

Seventy-four woodpulp mills were in operation in the Northeast in 1962. The total capacity of these mills at that time was approximately 11,340 tons of woodpulp per day. Maine was the largest woodpulp producer. In 1962 that state's 22 mills had an estimated daily capacity of 5,891 tons. New York was second with 28 mills, which had a total capacity of 2,026 tons per day. Pennsylvania held third place, with a capacity of some 1,705 tons per day in 12 mills.

Woodpulp is manufactured by several different methods in the Northeast. About half is manufactured by the groundwood or chemi-groundwood processes,¹ and more than one-fourth by the

¹U. S. Forest Service. WOODPULP MILLS IN THE UNITED STATES. 22 pp., illus., 1961.

Figure 1. — The trend of pulpwood consumption in the Northeast has not accelerated as fast as that for the United States as a whole until about 1961.



sulfite process. The remainder is produced by the sulfate, soda, or semichemical processes.

The pulp-and-paper industry in the Northeast has increased, but its rate of growth has tended to lag behind the industry's national rate of growth (fig. 1).

Data Collection

The data for this annual pulpwood production survey were gathered by means of mail questionnaires. Questionnaires were sent to most woodpulp mills in the 12-state study area and to some mills in neighboring states and Canada. In Maine, only those mills thought to be consuming some wood from Canada were canvassed. The Maine Forest Service supplied the estimates of domestic pulp-

wood production in Maine, and the Vermont Department of Forests and Parks supplied similar information for Vermont. Questionnaires were sent to 56 mills, and all mills responded.

The questionnaires were used also to collect information about the production of wood chips for use in woodpulp manufacture, and about the use of wood-industry byproducts in woodpulp manufacture. Because of the nature of these two classes of material, it was necessary to limit the species breakdown to hardwoods and softwoods, and it was impossible, as well as meaningless, to give location of production by county.

Pulpwood Production

In 1963 the 12 Northeastern States produced 3,990,600 cords of round pulpwood, 316,200 cords of wood chips for pulpwood (produced primarily from sawmill slabs and edgings), and 3,100 cords of pulpwood from miscellaneous wood-industry byproducts. In all, the Northeast produced the equivalent of 4,309,900 cords of pulpwood.

After a general industry-wide slump in 1958, pulpwood consumption began to rise again. However, both consumption and receipts had failed, as of December 1963, to reach the previous high levels attained in 1956.

Consumption of hardwood pulpwood rose steadily from 1955 to 1963 for a total increase of 35 percent in 8 years (fig. 2). The gradual employment of improved methods, which use greater quantities of hardwoods, has had the effect of broadening the resource base. A large volume of hardwood in the resource base has become an opportunity rather than a hindrance to the development of the woodpulp industry.

One group of tables that follow shows the production of pulpwood, by states, counties, and species group, for each of the 12 Northeastern States. Table 18 shows round pulpwood by state, and the amount of this production consumed in and out of the state. Two tables show production, consumption, and inter-regional shipment of wood chips and miscellaneous wood-industry byproducts used in manufacturing woodpulp.

PULPWOOD CONSUMPTION IN THE NORTHEAST

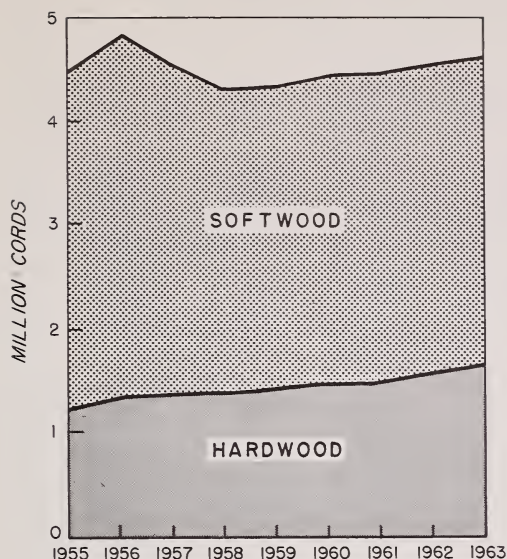


Figure 2. — Total pulpwood consumption dropped to a low point in 1958, but hardwood pulpwood consumption increased steadily from 1955 to 1963.

Of the 12 Northeastern States, Maine led in the production of round pulpwood with 2,150,600 cords (table 2), or 54 percent of the 3,990,600 cords produced in the Northeast. Pennsylvania was second with 511,800 cords, which was 13 percent of the total. New York placed third with 417,000 cords (10 percent of the total); and West Virginia, with no pulping capacity of its own, placed fourth with 300,200 cords, which was 7 percent of the total. These four states together supplied 85 percent of the total production. The remaining eight States, ranked in order of highest production, were: New Hampshire, Vermont, Maryland, New Jersey, Delaware, Massachusetts, Connecticut, and Rhode Island.

Throughout the Northeast, softwoods accounted for 59 percent of the round pulpwood that was produced. However, the proportion of hardwood in the round pulpwood production was higher in the southern section of the region than in the northern section. In Maine, hardwoods accounted for only 25 percent of the total round pulpwood output, whereas in Pennsylvania they accounted for nearly 78 percent.

Spruce and fir accounted for 42 percent of all round pulpwood

Table 1. — Pulpwood received and consumed by woodpulp mills in the Northeast, by years, 1955 to 1963

(In thousands of rough cords¹)

Year and species group	Receipts			Consumption
	Domestic	Imported	Total	
1955 Softwood	2,497.6	791.0	3,288.6	3,268.0
Hardwood	1,103.2	135.2	1,238.4	1,222.6
Total	3,600.8	926.2	4,527.0	4,490.6
1956 Softwood	2,787.4	900.1	3,687.5	3,496.9
Hardwood	1,220.7	143.0	1,363.7	1,339.0
Total	4,008.1	1,043.1	5,051.2	4,835.9
1957 Softwood	2,566.2	705.4	3,271.6	3,167.8
Hardwood	1,231.6	196.4	1,428.0	1,362.3
Total	3,797.8	901.8	4,699.6	4,530.1
1958 Softwood	2,208.6	535.7	2,744.3	2,936.1
Hardwood	1,103.1	90.0	1,193.1	1,364.2
Total	3,311.7	625.7	3,937.4	4,300.3
1959 Softwood	2,093.4	466.7	2,560.1	2,901.5
Hardwood	1,292.5	130.8	1,423.3	1,409.5
Total	3,385.9	597.5	3,983.4	4,311.0
1960 Softwood	2,657.0	434.6	3,091.6	2,988.3
Hardwood ²	1,383.2	140.0	1,523.2	1,446.5
Total	4,040.2	574.6	4,614.8	4,434.8
1961 Softwood	2,433.8	398.0	2,831.8	2,951.8
Hardwood ²	1,313.7	133.0	1,446.7	1,489.2
Total	3,747.5	531.0	4,278.5	4,441.0
1962 Softwood	2,468.8	386.4	2,855.2	2,938.4
Hardwood	1,441.1	115.0	1,556.1	1,591.6
Total	3,909.9	501.4	4,411.3	4,530.0
1963 Softwood	2,604.8	335.9	2,940.7	2,963.5
Hardwood	1,464.7	99.9	1,564.6	1,648.8
Total	4,069.5	435.8	4,505.3	4,612.3

Source: U. S. Bureau of the Census. FACTS FOR INDUSTRY, SERIES M14A; and CURRENT INDUSTRIAL REPORTS, SERIES M26A. The Northeast data are for woodpulp mills in nine States. Delaware and West Virginia have no woodpulp mills, and data for mills in Maryland were withheld to avoid disclosing figures for individual companies.

¹ Standard cords of 128 cubic feet of wood, bark, and airspace.

² Approximate distribution of total hardwood receipts between domestic and imported was obtained by using the 1959 percentage distribution.

Table 3. — Pulpwood chip production in the Northeast, by state and destination and by softwood and hardwood, 1963¹
(In thousands of cords)

State ²	Total production		Consumed within state		Consumed in other states		
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Total
Maine	110.1	8.0	118.1	97.3	8.0	105.3	12.8 (N. H.)
Maryland	35.7	9.9	45.6	—	—	—	3.3 (N. J.)
Massachusetts	.1	5.6	5.7	—	—	—	32.4 (Pa.)
New Hampshire	34.1	7.6	41.7	25.5	7.0	32.5	.1 (N. Y.)
New York	6.4	19.8	26.2	6.4	15.2	21.6	8.5 (Maine)
Pennsylvania	3.8	18.8	22.6	3.8	18.8	22.6	.1 (N. Y.)
Vermont	7.1	10.6	17.7	—	—	—	.1 (N. J.)
West Virginia	—	38.6	38.6	—	—	—	—
Virginia	—	—	—	—	—	—	1.6 (N. H.)
Quebec	—	—	—	—	—	—	5.5 (N. Y.)
Total	197.3	118.9	316.2	133.0	49.0	182.0	10.6 (Ohio)
							38.6 (Pa.)
							.2 (N. H.)
							69.9
							142.1

¹The data presented in this table are for pulpwood chips produced, by State. They do not represent the source of raw material for chipping plants (sawmill slabs and edgings); nor do they include wood chips not used in the manufacture of woodpulp.
² States with no production are omitted.

Table 4. — Miscellaneous wood-industry byproducts used in woodpulp manufacture, by state and destination
and by softwood and hardwood, 1963

State ¹	(In thousands of cords)									
	Total production			Consumed within state				Consumed in other states		
	Softwood	Hardwood	Total	Softwood	Hardwood	Total	Total	Softwood	Hardwood	Total
New Jersey	2.0	0.4	2.4	2.0	0.4	2.4	2.4	—	—	—
New York	—	.1	.1	—	.1	.1	.1	—	—	—
Vermont	—	.6	.6	—	—	—	—	—	0.6	0.6 (N. Y.)
Total	2.0	1.1	3.1	2.0	0.5	2.5	2.5	—	0.6	0.6

¹ States with no production are omitted.

produced in 1963. This fact is somewhat misleading because only four states in the region produced spruce and fir pulpwood, and Maine alone produced 84 percent of this volume (table 2). Spruce and fir accounted for nearly 65 percent of Maine's total round pulpwood production.

In addition to the nearly 4 million cords of round pulpwood produced, the equivalent of 316,200 cords were produced in 1963 in the form of wood chips (table 3). Approximately two-thirds of the wood-chip production was consumed within the state where it was produced. Pennsylvania and New Hampshire were the only states that received wood chips from outside the region: Pennsylvania received 7,700 cords of chips from Virginia and New Hampshire received 200 cords from Quebec.

Wood-industry byproducts were also used in the manufacture of woodpulp. All of this production (3,100 cords) came from three states: New York, New Jersey, and Vermont (table 4).

Round pulpwood production for each State, by county and species group, is shown in tables 6 through 17. These tables are summarized in figure 3, which shows the location and production class of counties in the 12 Northeastern States. Table 18 shows the round pulpwood production for each state, and the consumption in and outside the state.

Inter-Regional Shipments

Of the total round pulpwood production of 3,990,600 cords, 19 percent (767,400 cords) was consumed outside the state in which the pulpwood was cut. 158,000 cords were shipped out of the region. Of this volume Virginia received 109,800 cords, Ontario 31,300 cords, and Quebec 16,900 cords.

The Northeast in 1963 imported 393,100 cords of round pulpwood from outside the area — from Kentucky, Ohio, and Virginia, and from New Brunswick, Nova Scotia, Ontario, and Quebec (table 5). The Canadian portion (339,600 cords) made up 86 percent of the import total. This import total shows a trend away from the use of imported pulpwood (table 1).

Table 5. — Roundwood imported from outside the Northeast, 1963

(In thousands of rough cords)

Source of production and species group	Destination					Total imported
	Mary- land	Maine	New Hamp- shire	Penn- sylvania	New York	
Kentucky:						
Softwood	2.5	—	—	—	—	2.5
Hardwood	—	—	—	—	—	—
Total	2.5	—	—	—	—	2.5
Ohio:						
Softwood	1.7	—	—	—	—	1.7
Hardwood	(*)	—	—	1.3	—	1.3
Total	1.7	—	—	1.3	—	3.0
Virginia:						
Softwood	—	—	—	47.4	—	47.4
Hardwood	—	—	—	.6	—	.6
Total	—	—	—	48.0	—	48.0
New Brunswick:						
Softwood	—	161.5	—	—	—	161.5
Hardwood	—	7.0	—	—	—	7.0
Total	—	168.5	—	—	—	168.5
Nova Scotia:						
Softwood	—	7.7	—	—	—	7.7
Hardwood	—	—	—	—	—	—
Total	—	7.7	—	—	—	7.7
Ontario:						
Softwood	—	—	—	34.8	6.5	41.3
Hardwood	—	—	—	21.1	—	21.1
Total	—	—	—	55.9	6.5	62.4
Quebec:						
Softwood	—	—	22.6	.1	47.3	70.0
Hardwood	—	.8	21.8	—	8.4	31.0
Total	—	.8	44.4	.1	55.7	101.0
Grand total	4.2	177.0	44.4	105.3	62.2	393.1

* Less than 50 cords.

ROUND PULPWOOD PRODUCTION IN THE NORTHEAST, 1963

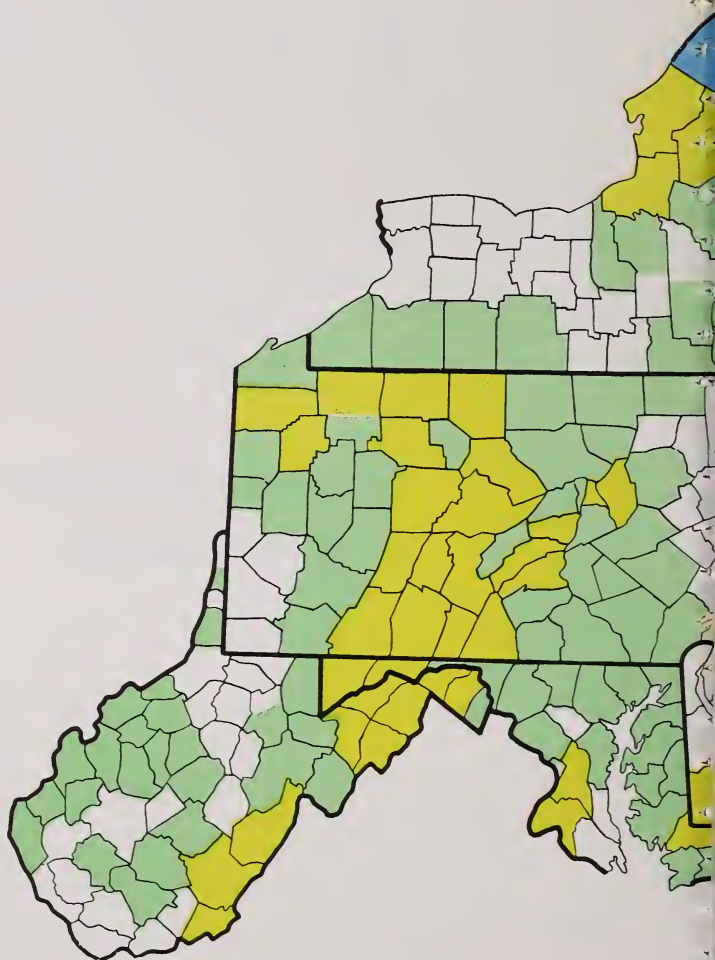
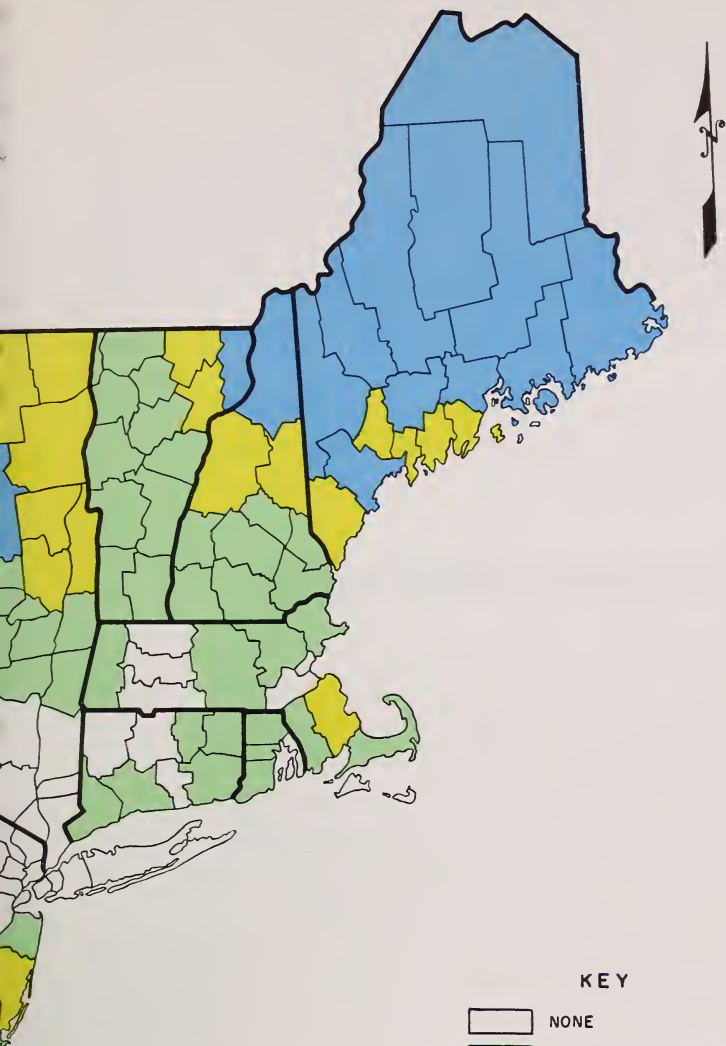
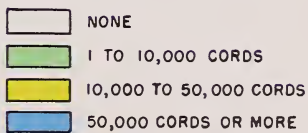


Figure 3. — The pattern of round pulpwood production in the Northeast in 1963.



KEY



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Miles

Combining the 3,732,600 cords of round pulpwood produced in and intended for consumption within the region with the 393,100 cords imported from outside the region gives a total net receipt of round pulpwood in the region of 4,125,700 cords in 1963.

Of the total 316,000 cords of wood chips produced in the region, only 38,600 cords of hardwood chips were shipped out; this volume went to Ohio. A total of 8,100 cords were received from outside the region. All the miscellaneous byproducts (3,100) were consumed in the region. This gives a total of 285,700 cords of pulpwood chips and byproducts received by mills in the region in 1963.

Combining 4,125,700 cords of round pulpwood and 285,700 cords of chips and byproducts gives a total net receipt of all pulpwood by mills in the region of 4,411,400 cords in 1963.

Buying Practices

Units of measure. — The largest portion of round pulpwood in the Northeast is purchased in cords of 128 cubic feet, made up of bolts 48 inches long. However, in the southern portion of the area substantial quantities are purchased in 160-cubic-foot cords, in bolts 60 inches long. The 160-cubic-foot cord is occasionally referred to as a "unit" to distinguish it from the standard 128-cubic-foot cord. A few mills reported buying wood on a weight basis, but this has not yet become a widespread practice.

Wood chips are usually measured by dry weight, although some mills reported buying chips by the cord. Wood-industry byproducts are usually reported on a weight basis, although a volume basis may sometimes be used.

Procurement area. — Most woodpulp mills try to procure wood as close to the mill as possible — usually within a 50-mile radius. However, some mills obtain wood at greater distances from their mill location. This is usually true if a mill needs a particular species or group of species to fill out its pulpwood requirement and the species is not readily available within the usual procurement area. Wood chips may be procured much further away than round-

wood. Because most chipping plants are located at rail sidings, the chips are often shipped by rail in hopper cars.

Debarking

For the Northeast as a whole, 15 percent of the total round pulpwood was debarked before shipment to the mill. And of the total pulpwood production, Delaware debarked 22 percent of its wood, Vermont 21 percent, and Maine and New Hampshire about 18 percent each. In Maine alone, about 387,000 rough cords of round pulpwood were debarked before reaching the woodpulp mill yards.

Among the species groups, 85 percent of the aspen and yellow-poplar was debarked, 64 percent of the hemlock and tamarack, and 15 percent of the spruce and fir. Only 7 percent of the pine and 9 percent of the other hardwoods was debarked. However, the volume of spruce and fir that had been debarked was greater than for any other species group — about 248,000 rough cords.



Table 6. — Round pulpwood production in Connecticut,
by county and species group, 1963

(In thousands of rough cords)

County	Softwood				Hardwood			All species
	Spruce and fir	Hemlock and tamarack	Pine	Total	Aspen and yellow-poplar	Other hardwoods	Total	
Fairfield	—	—	1.4	1.4	—	—	—	1.4
Hartford	—	—	—	—	—	—	—	—
Litchfield	—	—	—	—	—	—	—	—
Middlesex	—	—	—	—	—	—	—	—
New Haven	—	—	3.8	3.8	—	—	—	3.8
New London	—	—	.4	.4	—	1.1	1.1	1.5
Tolland	—	—	.3	.3	—	.2	.2	.5
Windham	—	—	2.0	2.0	—	6.6	6.6	8.6
Total	—	—	7.9	7.9	—	7.9	7.9	15.8

Table 7. — Round pulpwood production in Delaware,
by county and species group, 1963

(In thousands of rough cords)

County	Softwood				Hardwood			All species
	Spruce and fir	Hemlock and tamarack	Pine	Total	Aspen and yellow-poplar	Other hardwoods	Total	
Kent	—	—	—	—	—	—	—	—
Newcastle	—	—	—	—	—	—	—	—
Sussex	—	—	26.3	26.3	—	0.1	0.1	26.4
Total	—	—	26.3	26.3	—	0.1	0.1	26.4

Table 8. — Round pulpwood production in Maine,
by county and species group, 1963

(In thousands of rough cords)

County	Softwood				Hardwood		Total	All species
	Spruce and fir	Hemlock and tamarack	Pine	Total	Aspen and yellow-poplar	Other hardwoods		
Androscoggin	4.0	3.5	7.0	14.5	0.2	15.1	15.3	29.8
Aroostook	382.9	10.5	—	393.4	19.3	29.9	49.2	442.6
Cumberland	5.4	2.0	12.4	19.8	(*)	34.0	34.0	53.8
Franklin	60.6	6.4	(*)	67.0	2.0	39.8	41.8	108.8
Hancock	47.9	8.3	—	56.2	.1	7.9	8.0	64.2
Kennebec	12.2	8.0	6.2	26.4	.5	39.7	40.2	66.6
Knox	6.8	1.4	—	8.2	(*)	3.6	3.6	11.8
Lincoln	18.7	1.6	6.3	26.6	(*)	10.7	10.7	37.3
Oxford	38.3	11.2	9.7	59.2	1.1	95.9	97.0	156.2
Penobscot	150.8	43.9	.1	194.8	5.5	85.1	90.6	285.4
Piscataquis	200.6	12.2	—	212.8	2.8	21.7	24.5	237.3
Sagadahoc	3.6	.8	6.8	11.2	—	3.4	3.4	14.6
Somerset	321.5	12.4	.1	334.0	1.5	54.8	56.3	390.3
Waldo	22.2	2.3	(*)	24.5	.2	33.6	33.8	58.3
Washington	116.9	45.2	—	162.1	.8	8.0	8.8	170.9
York	.5	(*)	6.4	6.9	—	15.8	15.8	22.7
Total	1,392.9	169.7	55.0	1,617.6	34.0	499.0	533.0	2,150.6

* Less than 50 cords.

Table 9. — Roundwood pulpwood production in Maryland,
by county and species group, 1963

(In thousands of rough cords)

County	Softwood				Hardwood			All species
	Spruce and fir	Hemlock and tamarack	Pine	Total	Aspen and yellow-poplar	Other hardwoods	Total	
Allegany	—	—	6.2	6.2	—	30.4	30.4	36.6
Ann Arundel	—	—	4.6	4.6	—	—	—	4.6
Baltimore	—	—	(*)	(*)	—	.4	.4	.4
Calvert	—	—	—	—	—	—	—	—
Caroline	—	—	9.1	9.1	—	(*)	(*)	9.1
Carroll	—	—	(*)	(*)	—	(*)	(*)	(*)
Cecil	—	—	.2	.2	—	.3	.3	.5
Charles	—	—	12.5	12.5	—	.2	.2	12.7
Dorchester	—	—	5.9	5.9	—	—	—	5.9
Frederick	—	—	(*)	(*)	—	.7	.7	.7
Garrett	—	—	1.3	1.3	—	32.5	32.5	33.8
Harford	—	—	.2	.2	—	—	—	.2
Howard	—	—	—	—	—	—	—	—
Kent	—	—	.3	.3	—	—	—	.3
Montgomery	—	—	.5	.5	—	—	—	.5
Prince Georges	—	—	10.3	10.3	—	.3	.3	10.6
Queen Annes	—	—	1.4	1.4	—	—	—	1.4
St. Marys	—	—	—	—	—	—	—	—
Somerset	—	—	.4	.4	—	—	—	.4
Talbot	—	—	.9	.9	—	—	—	.9
Washington	—	—	.4	.4	—	.7	.7	1.1
Wicomico	—	—	14.9	14.9	—	—	—	14.9
Worcester	—	—	3.4	3.4	—	—	—	3.4
Total	—	—	72.5	72.5	—	65.5	65.5	138.0

* Less than 50 cords.

Table 10. — Round pulpwood production in Massachusetts,
by county and species group, 1963

(In thousands of rough cords)

County ¹	Softwood				Hardwood			All species
	Spruce and fir	Hemlock and tamarack	Pine	Total	Aspen and yellow-poplar	Other hard-woods	Total	
Barnstable	—	—	0.2	0.2	—	0.1	0.1	0.3
Berkshire	—	—	—	—	—	3.1	3.1	3.1
Bristol	—	—	2.4	2.4	—	2.2	2.2	4.6
Essex	—	—	—	—	—	1.4	1.4	1.4
Middlesex	—	—	—	—	—	.2	.2	.2
Plymouth	—	—	7.1	7.1	—	7.3	7.3	14.4
Worcester	—	—	—	—	—	1.7	1.7	1.7
Total	—	—	9.7	9.7	—	16.0	16.0	25.7

¹Counties with no production are omitted.

Table 11. — Round pulpwood production in New Hampshire,
by county and species group, 1963

(In thousands of rough cords)

County	Softwood				Hardwood			All species
	Spruce and fir	Hemlock and tamarack	Pine	Total	Aspen and yellow-poplar	Other hard-woods	Total	
Belknap	—	—	—	—	—	0.1	0.1	0.1
Carroll	0.8	(*)	0.4	1.2	(*)	12.5	12.5	13.7
Cheshire	(*)	(*)	(*)	(*)	—	.9	.9	.9
Coos	66.2	5.8	2.6	74.6	2.1	64.0	66.1	140.7
Grafton	6.6	.8	.4	7.8	.1	6.6	6.7	14.5
Hillsborough	(*)	(*)	(*)	(*)	—	1.8	1.8	1.8
Merrimack	—	—	—	—	—	2.2	2.2	2.2
Rockingham	—	—	—	—	—	2.4	2.4	2.4
Strafford	—	—	—	—	—	2.3	2.3	2.3
Sullivan	—	—	—	—	—	1.4	1.4	1.4
Total	73.6	6.6	3.4	83.6	2.2	94.2	96.4	180.0

* Less than 50 cords.

Table 12. — Round pulpwood production in New Jersey,
by county and species group, 1963

(In thousands of rough cords)

County ¹	Softwood				Hardwood			All species
	Spruce and fir	Hemlock and tamarack	Pine	Total	Aspen and yellow-poplar	Other hardwoods	Total	
Atlantic	—	—	2.2	2.2	—	—	—	2.2
Burlington	—	—	17.2	17.2	—	3.9	3.9	21.1
Camden	—	—	4.6	4.6	—	7.7	7.7	12.3
Gloucester	—	—	6.4	6.4	—	3.8	3.8	10.2
Monmouth	—	—	1.1	1.1	—	—	—	1.1
Ocean	—	—	14.6	14.6	—	—	—	14.6
Total	—	—	46.1	46.1	—	15.4	15.4	61.5

¹Counties with no production are omitted.

Table 13. — Roundwood pulpwood production in New York,
by county and species group, 1963

(In thousands of rough cords)

County ¹	Softwood				Hardwood		Total	All species
	Spruce and fir	Hemlock and tamarack	Pine	Total	Aspen and yellow-poplar	Other hard-woods		
Albany	—	—	—	—	—	0.6	0.6	0.6
Allegany	—	0.1	0.6	0.7	—	1.5	1.5	2.2
Broome	—	—	—	—	—	.1	.1	.1
Cattaraugus	—	.2	.6	.8	—	5.9	5.9	6.7
Cayuga	—	—	—	—	0.6	.6	1.2	1.2
Chautauqua	—	(*)	.2	.2	—	1.6	1.6	1.8
Chenango	—	—	—	—	—	.2	.2	.2
Clinton	7.9	.8	10.9	19.6	1.6	22.1	23.7	43.3
Columbia	—	—	—	—	—	3.5	3.5	3.5
Delaware	.3	.1	.6	1.0	.1	1.9	2.0	3.0
Essex	5.5	.3	2.6	8.4	1.8	31.1	32.9	41.3
Franklin	13.1	.6	4.2	17.9	1.2	6.8	8.0	25.9
Fulton	2.1	(*)	(*)	2.1	.5	6.4	6.9	9.0
Greene	—	—	—	—	—	.1	.1	.1
Hamilton	32.0	—	.1	32.1	.1	23.4	23.5	55.6
Herkimer	8.6	(*)	(*)	8.6	(*)	3.9	3.9	12.5
Jefferson	—	.4	5.9	6.3	(*)	3.9	3.9	10.2
Lewis	4.0	1.0	7.8	12.8	.4	8.4	8.8	21.6
Montgomery	(*)	—	.3	.3	—	1.7	1.7	2.0
Oneida	1.1	.2	1.5	2.8	(*)	4.1	4.1	6.9
Onondaga	—	—	—	—	—	(*)	(*)	(*)
Oswego	(*)	.4	3.7	4.1	2.3	9.2	11.5	15.6
Otsego	.1	—	—	.1	—	—	—	.1
Rensselaer	.3	—	—	.3	.2	7.5	7.7	8.0
St. Lawrence	12.7	3.5	15.0	31.2	5.3	14.1	19.4	50.6
Saratoga	.9	3.8	(*)	4.7	1.0	19.2	20.2	24.9
Schenectady	—	—	—	—	—	.2	.2	.2
Schoharie	(*)	—	(*)	(*)	—	2.6	2.6	2.6
Steuben	—	(*)	(*)	(*)	—	—	—	(*)
Sullivan	—	(*)	—	(*)	—	—	—	(*)
Warren	2.4	.1	.1	2.6	2.4	38.5	40.9	43.5
Washington	.3	.1	.1	.5	.7	22.6	23.3	23.8
Total	91.3	11.6	54.2	157.1	18.2	241.7	259.9	417.0

* Less than 50 cords.

¹ Counties with no production are omitted.

Table 14. — Round pulpwood production in Pennsylvania,
by county and species group, 1963

(In thousands of rough cords)

County ¹	Softwood				Hardwood			All species
	Spruce and fir	Hemlock and tamarack	Pine	Total	Aspen and yellow- poplar	Other hard- woods	Total	
Adams	—	—	0.2	0.2	—	3.8	3.8	4.0
Armstrong	—	—	—	—	—	.1	.1	.1
Bedford	—	—	13.7	13.7	—	36.0	36.0	49.7
Berks	—	—	4.0	4.0	—	(*)	(*)	4.0
Blair	—	1.1	1.3	2.4	—	16.6	16.6	19.0
Bradford	—	(*)	(*)	(*)	—	—	—	(*)
Butler	—	—	—	—	—	.3	.3	.3
Cambria	—	1.6	(*)	1.6	—	12.8	12.8	14.4
Cameron	—	(*)	3.6	3.6	—	.8	.8	4.4
Centre	—	3.0	6.9	9.9	—	21.5	21.5	31.4
Chester	—	—	—	—	—	.1	.1	.1
Clarion	—	(*)	.2	.2	(*)	3.3	3.3	3.5
Clearfield	—	4.6	4.0	8.6	(*)	24.8	24.8	33.4
Clinton	—	1.0	3.0	4.0	(*)	8.7	8.7	12.7
Columbia	—	—	2.1	2.1	—	9.6	9.6	11.7
Crawford	—	.1	—	.1	—	15.2	15.2	15.3
Cumberland	—	—	.5	.5	—	6.3	6.3	6.8
Dauphin	—	—	.1	.1	—	.3	.3	.4
Elk	—	1.0	1.8	2.8	—	23.2	23.2	26.0
Erie	—	—	(*)	(*)	—	4.5	4.5	4.5
Fayette	—	—	—	—	—	3.9	3.9	3.9
Forest	—	(*)	.4	.4	—	4.8	4.8	5.2
Franklin	—	—	4.9	4.9	—	17.8	17.8	22.7
Fulton	—	—	9.5	9.5	—	15.8	15.8	25.3
Huntingdon	—	—	12.7	12.6	—	24.3	24.3	36.9
Indiana	—	—	—	—	—	.8	.8	.8
Jefferson	—	.2	.1	.3	0.2	6.2	6.4	6.7
Juniata	—	—	6.1	6.1	—	8.0	8.0	14.1
Lancaster	—	—	(*)	(*)	—	2.0	2.0	2.0
Lawrence	—	—	—	—	—	.1	.1	.1
Lebanon	—	—	(*)	(*)	—	—	—	(*)
Luzerne	—	(*)	.8	.8	—	2.8	2.8	3.6
Lycoming	—	.2	.7	.9	—	4.0	4.0	4.9
McKean	—	1.6	1.0	2.6	—	26.8	26.8	29.4

CONTINUED

TABLE 14 — CONTINUED

(In thousands of rough cords)

County ¹	Softwood				Hardwood			All species
	Spruce and fir	Hemlock and tamarack	Pine	Total	Aspen and yellow-poplar	Other hardwoods	Total	
Mercer	—	—	—	—	—	1.1	1.1	1.1
Mifflin	—	—	(*)	(*)	—	—	—	(*)
Montour	—	(*)	2.1	2.1	—	9.6	9.6	11.7
Northumberland	—	—	.6	.6	—	2.8	2.8	3.4
Perry	—	(*)	3.2	3.2	—	7.1	7.1	10.3
Potter	—	.3	.1	.4	—	3.9	3.9	4.3
Schuylkill	—	(*)	1.2	1.2	—	3.8	3.8	5.0
Snyder	—	—	7.9	7.9	—	17.7	17.7	25.6
Somerset	—	—	1.5	1.5	—	11.4	11.4	12.9
Sullivan	—	(*)	.6	.6	—	3.8	3.8	4.4
Susquehanna	—	—	(*)	(*)	—	—	—	(*)
Tioga	—	(*)	.1	.2	—	.4	.4	.6
Union	—	—	.6	.6	—	2.8	2.8	3.4
Venango	—	—	—	—	—	12.1	12.1	12.1
Warren	—	(*)	.1	.1	—	11.5	11.5	11.6
Westmoreland	—	—	(*)	(*)	—	.6	.6	.6
York	—	—	3.1	3.1	—	4.4	4.4	7.5
Total	—	14.7	98.7	113.4	0.2	398.2	398.4	511.8

* Less than 50 cords.

¹ Counties with no production are omitted.

Table 15. — Round pulpwood production in Rhode Island, by county and species group, 1963

(In thousands of rough cords)

County	Softwood				Hardwood			All species
	Spruce and fir	Hemlock and tamarack	Pine	Total	Aspen and yellow-poplar	Other hardwoods	Total	
Bristol	—	—	—	—	—	—	—	—
Kent	—	—	0.6	0.6	—	2.7	2.7	3.3
Newport	—	—	—	—	—	—	—	—
Providence	—	—	2.1	2.1	—	.9	.9	3.0
Washington	—	—	.5	.5	—	1.1	1.1	1.6
Total	—	—	3.2	3.2	—	4.7	4.7	7.9

Table 16. — Round pulpwood production in Vermont,
by county and species group, 1963

(In thousands of rough cords)

County	Softwood				Hardwood			All species
	Spruce and fir	Hemlock and tamarack	Pine	Total	Aspen and yellow-poplar	Other hardwoods	Total	
Addison	0.7	(*)	(*)	0.7	0.2	2.7	2.9	3.6
Bennington	(*)	—	—	(*)	(*)	1.8	1.8	1.8
Caledonia	15.9	0.6	0.2	16.7	.2	5.6	5.8	22.5
Chittenden	4.0	(*)	.8	4.8	.3	1.7	2.0	6.8
Essex	30.6	2.0	.4	33.0	.7	16.6	17.3	50.3
Franklin	8.7	—	.3	9.0	(*)	.1	.1	9.1
Grand Isle	(*)	—	—	(*)	(*)	.7	.7	.7
Lamoille	4.2	(*)	.4	4.6	(*)	.2	.2	4.8
Orange	2.9	(*)	(*)	2.9	(*)	.8	.8	3.7
Orleans	13.2	.4	.3	13.9	.1	3.6	3.7	17.6
Rutland	3.9	—	(*)	3.9	.5	3.3	3.8	7.7
Washington	7.1	.2	(*)	7.3	.1	1.2	1.3	8.6
Windham	6.8	—	—	6.8	.4	2.7	3.1	9.9
Windsor	6.9	(*)	(*)	6.9	.4	1.2	1.6	8.5
Total	104.9	3.2	2.4	110.5	2.9	42.2	45.1	155.6

* Less than 50 cords.

Table 17. — Round pulpwood production in West Virginia,
by county and species group, 1963

(In thousands of rough cords)

County ¹	Softwood				Hardwood			All species
	Spruce and fir	Hemlock and tamarack	Pine	Total	Aspen and yellow- poplar	Other hard- woods	Total	
Barbour	—	—	—	—	—	0.1	0.1	0.1
Berkeley	—	—	10.6	10.6	—	1.3	1.3	11.9
Boone	—	—	(*)	(*)	—	.2	.2	.2
Braxton	—	—	—	—	—	.2	.2	.2
Brooke	—	—	—	—	—	(*)	(*)	(*)
Cabell	—	—	.6	.6	—	—	—	.6
Calhoun	—	—	.3	.3	—	(*)	(*)	.3
Fayette	—	—	.1	.1	—	.5	.5	.6
Gilmer	—	—	(*)	(*)	—	.1	.1	.1
Grant	—	—	4.7	4.7	—	21.1	21.1	25.8
Greenbrier	—	—	1.6	1.6	—	28.8	28.8	30.4
Hampshire	—	—	20.4	20.4	—	23.9	23.9	44.3
Hardy	—	—	10.6	10.6	—	14.9	14.9	25.5
Jackson	—	—	1.5	1.5	—	.1	.1	1.6
Jefferson	—	—	—	—	—	.1	.1	.1
Marshall	—	—	—	—	—	(*)	(*)	(*)
Mason	—	—	3.9	3.9	—	.5	.5	4.4
Mineral	—	—	6.6	6.6	—	23.7	23.7	30.3
Monroe	—	—	5.0	5.0	—	39.2	39.2	44.2
Morgan	—	—	14.5	14.5	—	6.9	6.9	21.4
Nicholas	—	—	—	—	—	(*)	(*)	(*)
Pendleton	—	—	2.0	2.0	—	3.8	3.8	5.8
Pleasants	—	—	(*)	(*)	—	(*)	(*)	(*)
Pocahontas	—	—	1.3	1.3	—	12.7	12.7	14.0
Preston	—	—	(*)	(*)	—	3.6	3.6	3.6
Putnam	—	—	1.5	1.5	—	(*)	(*)	1.5
Raleigh	—	—	.1	.1	—	.3	.3	.4
Randolph	—	—	.1	.1	—	3.1	3.1	3.2
Ritche	—	—	1.9	1.9	—	2.7	2.7	4.6
Roane	—	—	2.6	2.6	—	—	—	2.6
Tucker	—	—	.1	.1	—	8.6	8.6	8.7
Wayne	—	—	(*)	(*)	—	—	—	(*)
Wirt	—	—	5.5	5.5	—	2.8	2.8	8.3
Wood	—	—	4.3	4.3	—	1.2	1.2	5.5
Total	—	—	99.8	99.8	—	200.4	200.4	300.2

* Less than 50 cords.

¹Counties with no production are omitted.

Table 18. — Round pulpwood production in the Northeast, by state and by consumption in-state and out-of-state, 1963

(In thousands of rough cords)

State	Total production	Consumed in-state	Consumed out-of-state
Connecticut	15.8	(d)	(d)
Delaware	26.4	—	26.4
Maine	2,150.6	2,041.7	108.9
Maryland	137.9	(d)	(d)
Massachusetts	25.7	(d)	(d)
New Hampshire	180.3	143.4	36.9
New Jersey	61.5	61.5	—
New York	417.0	380.2	36.8
Pennsylvania	511.8	472.8	39.0
Rhode Island	7.9	(d)	(d)
Vermont	155.5	25.5	130.0
West Virginia	300.2	—	300.2
Total	3,990.6	3,223.2	767.4

"d" Information withheld to avoid disclosing data for individual mills.



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